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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,443	12/19/2001	Charles L. Gray JR.		2093

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LORUSSO & LOUD
3137 Mount Vernone Avenue
Alexandria, VA 22305

EXAMINER

HOOK, JAMES F

ART UNIT	PAPER NUMBER
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3752

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,443

Applicant(s)

GRAY, CHARLES L.

Examiner

James F. Hook

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Weber (012). The patent to Weber discloses the recited hydraulic accumulator comprising a rigid tank 3, there are first and second fixtures at each end of the tank for communication with a fluid through the bottom fixture in the area of reference numeral 15 and with a gas through the top fixture in the area of reference numeral 5, a flexible metal non elastic bladder 9 in the form of a bellows made of a metal that separates the interior of the tank into a gas space 7 and a fluid space inside of the bladder, a shut off valve 20 will stop flow when the liquid hits a minimum value, and in figure 2 the bellows is reversed to contain the gas.

Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipate by Miller. The patent to Miller discloses the recited hydraulic accumulator comprising a rigid tank 18, there are first and second fixtures 23,24 and the unmarked tube between reference numerals 22 and 27 for communication with a fluid through the bottom fixtures 23,24

and with a gas through the top fixture in the area of reference numeral 22, a bladder 20 in the form of a gas filled bladder separates the interior of the tank into a gas space and a fluid space inside of the bladder, and where a vent 27 for any gas accumulated in the liquid side of the bellows can be vented where the vent 27 is considered in the end of the tank.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weber (012) in view of Legrand. The patent to Weber discloses all of the recited structure with the exception of providing a spring around the shut off valve. The patent to Legrand discloses the recited hydraulic accumulator comprising a rigid tank 1, there are first and second fixtures at each end of the tank for communication with a fluid through the bottom fixture in the area of reference numeral 14 and with a gas through the top fixture in the area of reference numeral 7, a flexible metal non elastic bladder 13 in the form of a bellows made of a metal alloy called INCONEL that separates the interior of the tank into a gas space 18 and a fluid space 17 inside of the bladder, a shut off valve 37 will inherently stop flow when the liquid hits a minimum value and is surrounded by a spring that mounted within the second fixture attached to it, and where a vent 21b for any gas accumulated in the liquid side of the bellows can be vented. It would have been

obvious to one skilled in the art to provided the valve in Weber with a spring as suggested by Legrand to insure that the valve is provided with the right amount of force to properly control the shut off of fluid at a specific pressure.

Claims 6-8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber (012) in view of Pietrykowski. The patent to Weber discloses all of the recited structure with the exception of forming the bellows of a hard plastic or a metal and plastic, and the thickness of the bellows. The patent to Pietrykowski discloses the recited hydraulic accumulator comprising a rigid tank 11 having a gas area 25, a liquid area 31, bellows 22 which can be formed of a metal and plastic material or only plastic materials. The use of any thickness metal is considered an obvious choice of mechanical expedients where it would have been obvious to one skilled in the art to modify the bellows in Weber to be of any thickness desired using routine experimentation to arrive at optimum values as such is merely a choice of mechanical expedients. It would have been obvious to modify the bellows in Weber to be formed of a metal and plastic or just plastic bellows as suggested by Pietrykowski as such would be a cheaper material to make the bellows from and yet still be a stiff bellows structure.

Claims 10 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber (012) in view of Miller. The patent to Weber discloses all of the recited structure with the exception of providing a vent for gas in the wall for venting out gas built up in the accumulator. The patent to Miller discloses the recited structure above. It would have been obvious to one skilled in the art to modify the accumulator in Weber by providing a valve for gas and placing it on the housing wall to allow for venting of gas in

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the liquid without venting it into the gas chamber as suggested by Miller, which would prevent changing of the gas volume due to unexpected venting of the gas from the liquid into to the gas area.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weber (012) in view of Thompson. The patent to Weber discloses all of the recited structure with the exception of providing a spring inside of the bellows running the length of the bellows. The patent to Thompson discloses the recited hydraulic accumulator comprising a rigid tank 12, metal bellows 14, which can be provided with a spring 62 running the length of the bellows. It would have been obvious to one skilled in the art to modify the bellows in Weber by providing a spring in the bellows to further control the deflection of the bellows as suggested by Thompson to allow for a stiffer bellows structure.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Mercier and Sugimura disclosing state of the art accumulators.

Response to Arguments

Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

With respect to the argument directed toward the use of Miller with respect to claim 14, the device is considered the equivalent of a hydraulic accumulator in function and would function in the same manner when no structure set forth in applicant's claim

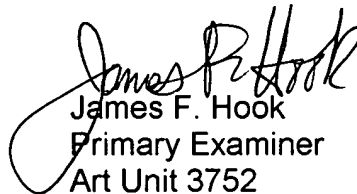
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differs from what is taught by Miller, therefor it would be considered merely intended use if the accumulator in Miller were not considered to be an accumulator, however, the examiner believes without any evidence or suggestion that the device in Miller could not function as an accumulator in the same manner as applicants claimed apparatus of claim 14, then it is an accumulator. The mention that Miller is not a "power storage device" is not persuasive when such is not a requirement of the claim language.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (703) 308-2913. The examiner can normally be reached on Monday to Wednesday, work at home Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (703) 308-2087. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.


James F. Hook
Primary Examiner
Art Unit 3752

JFH